

Thermal Processing



STRESS RELIEVING

Stress Relieving diminishes the residual stress in steel caused by working the material (i.e. flame cutting, forming, rolling, casting, machining, welding, bending, straightening). This is accomplished by reheating the steel then cooling it at a slower rate.

- Stress relieving can be performed before grinding on parts that require light machining
- Often used on weldments



Our furnaces are 96" wide x 144" long x 54" high

NORMALIZING

Normalizing is accomplished by heating the metal above the transformation temperature, then cooling it in still or slightly agitated air. Benefits include:

- Refines/reduces the grain size of steels that have been subjected to high temperatures
- Prepares steel for heavy machining
- When machined, provides a better surface finish



These furnaces have a weight capacity of 30,000 lbs.

ANNEALING

Annealing is accomplished by heating the metal just below the transformation temperature, then cooling in a controlled cycle which limits the cooling rate and brings the temperature down slowly. Benefits include:

- Softens metal
- Changes mechanical/electrical properties
- Aids in dimensional stability
- Greatly improves forming and bending



Order flame cut pieces to your specifications, annealed and ready to ship to your location.

CAPABILITIES

Thermal Process	Temperature	Length of Program	Minimum Hole Size	Max Plate Capacity	Approved Materials
Annealing	1400°F (max)	23 hours	n/a	96" x 144"	Carbon / Alloys Only
Normalizing	1650°F (max)	9 hours	n/a	96" x 144"	Carbon / Alloys Only
Stress Relieving	1300°F (max)	9 hours	n/a	96" x 144"	Carbon / Alloys Only

This chart is a guideline only. For more specific information please contact your Alro representative.



Alro Steel
Metals & Plastics

alro.com



Alro Locations



● **Metals** ● **Plastics** ● **Outlet Stores**

Alro Steel was founded in 1948 by brothers Al and Robert Glick in Jackson, Michigan. The company is a distributor of metals and plastics. Alro is focused on offering cut-to-size metals and plastics with next day delivery to over 50,000 customers in North America. Alro operates over 80 locations in 16 states and provides a broad inventory of products under the following companies: Alro Steel, Alro Metals, Alro Metals Outlet, and Alro Plastics. Focused on exceeding our customers' expectations, we build relationships with all our customers, large and small. [To learn more, please visit alro.com.](http://alro.com)

Over 80 Locations in 16 States!

Florida	Michigan	Pennsylvania
Illinois	Missouri	Tennessee
Indiana	New York	Virginia
Iowa	North Carolina	Wisconsin
Kentucky	Ohio	
Maryland	Oklahoma	



Pictured, the Alro Steel facility in Pottsville, Michigan



Metals	Bar	Pipe & Tube	Plate & Sheet	Structural	Grating & Exp. Metal
Alloy	●	●	●		
Aluminum	●	●	●	●	●
Brass	●		●		
Bronze	●	●			
Carbon Steel	●	●	●	●	●
Cast Iron	●	●			
Copper	●	●	●		
Stainless Steel	●	●	●	●	●
Tool Steel	●		●		

e-Business Solutions

- Alro Online Store (MyAlro.com)
- Customized Summary Billing
- Tool Management Solutions
- B2B Transactions

Ask your Alro Representative for details!



Alro Steel

Metals & Plastics

Since 1948

